



Ian Tattersall

## THE RELUCTANT PALEOANTHROPOLOGIST: CHARLES DARWIN AND HUMAN EVOLUTION

IL PALEOANTROPOLOGO RILUTTANTE:  
CHARLES DARWIN E L'EVOLUZIONE UMANA

**Riassunto breve** - Se da un lato l'antropologia è stata fortemente influenzata dall'evoluzionismo darwiniano, dall'altro è anche vero che Darwin stesso fu piuttosto riluttante ad impegnarsi direttamente sul tema dell'evoluzione umana. Diverse possono essere le ragioni: il desiderio di evitare (ulteriori) confronti accesi; la difficoltà di avere a disposizione reperti "sicuri" ed i dubbi espressi dal suo stesso collega ed amico, Thomas Henry Huxley, sui primi ritrovamenti dell'Uomo di Neanderthal. Il suo stesso volume "The Descent of Man" viene considerato da molti più un'opera anti-poligenista e anti-schiavista, incentrata sulla selezione sessuale, che un trattato sulle - peraltro all'epoca piuttosto scarse - evidenze relative all'origine del genere umano.

Resta il fatto che in quest'opera Darwin sottolinea temi che ancor'oggi sono determinanti per la paleoantropologia, come la discendenza dell'uomo da una singola specie progenitrice simile alle grandi scimmie, il primato della locomozione eretta nell'evoluzione umana, la nascita degli ominidi nel continente africano e, nel bene e nel male, "la necessaria acquisizione in modo graduale di ciascun potere e capacità mentale".

**Parole chiave:** Paleoantropologia, Evoluzione, Darwin.

**Abstract** - *Although the whole sphere of anthropology has been greatly influenced by Darwin's theory of evolution, it is also true to state that Darwin himself was very reluctant to commit himself directly to the theme of human evolution. There were probably several reasons: the wish to avoid (further) hotly debated arguments; the difficulty of obtaining "reliable" archaeological remains, and the doubts expressed by his colleague and friend, Thomas Henry Huxley, on the early findings of Neanderthal Man. "The Descent of Man" is viewed by many to be more a statement of Darwin's views on anti-polygeny and anti-slavery - focusing as it does on sexual selection - than a treatise (definitely quite rare in those times) on evidence regarding the origin of the human race. The fact remains that, in his work, Darwin emphasised topics which are still today fundamental for palaeo-anthropology, such as the descent of man from a single ancestral species similar to the great apes, the unique development of walking upright in human evolution, the rise of hominids in the African continent and, for better or for worse, the necessary and gradual acquisition of all mental powers and capacities.*

**Key words:** Palaeo-anthropology, Evolution, Darwin.

### Introduction

It may seem remarkable that, given his enormous and continuing influence on the field of paleoanthropology, taking on the subject of Charles Darwin and Human Evolution in the great naturalist's bicentennial year turns out to be a rather frustrating enterprise. This is not due to any disinclination on his part to indulge in theoretical speculation about human origins; rather it traces to Darwin's extreme reluctance to become embroiled with the actual tangible evidence for human evolution.

Darwin was, of course, most famously reticent on the matter of human evolution in the pages of his great book *On The Origin of Species*, in which his only mention of human origins was one single throwaway comment: "light will be thrown on the origin of man and his history" (DARWIN 1859, 488).

This tantalizing remark has, of course, to rank among the most epic understatements ever, and it stands as evidence that Darwin fully understood the implications of his work for the origin of our own species, *Homo sapiens*. Indeed, there is good reason to believe that he had intended to discuss human origins in the "Big Book" he was slowly writing when he was galvanized into producing the *Origin* by the work of Alfred Wallace. But the question implicit in his teaser line, "what light?" was one that Darwin only ever came to grips with very indirectly in the remaining decades of his life. It was clear even in 1858-9, when Darwin was writing the *Origin*, that the most direct light on the origins of humankind would inevitably be shed by the fossil record. But even in his 1871 book *The Descent of Man, and Selection in Relation to Sex*, Darwin proved oddly hesitant to face that record's admittedly rather slender offerings.

## Motivations

There were undoubtedly multiple reasons for Darwin's neglect of a central issue. First, and most famously, there was the intellectual and social milieu in which he lived. Early Victorian England remained a straitlaced Anglican society whose upper classes, well remembering events in France not so long before, had little taste for radical ideas in any field. And the gentlemanly Darwin had little relish for stirring things up with radical ideas on human emergence.

Nonetheless, despite his diplomatic omission from the *Origin* of the contentious issue of human evolution, Darwin still saw his book widely condemned as intellectual heresy; in shock even a decade later, while contemplating the publication of *The Descent of Man*, he was driven to confess to a colleague that:

"When I publish my book, I can see that I shall meet with universal disapprobation, if not execution." (Letter to St George Mivart, April 23 [probably] 1869).

As the least combative of men, Darwin dreaded the response he knew that any attempt to clarify his position on human origins would receive. Which makes it hard to understand exactly why Darwin felt so strongly impelled to publish *The Descent of Man* - and even more difficult to comprehend why he gave it the provocative - and not quite accurately descriptive - title he did. Darwin's own avowed reason for going ahead with this book was simply "to see how far the general conclusions arrived at in my former works were applicable to man." But even this mild assurance sounds a bit disingenuous, given Darwin's assiduous avoidance in this work of any substantive consideration of the human fossil record.

A more plausible reason for Darwin's taking the plunge in *The Descent* has recently been suggested by the Darwinian historians James Moore and Adrian Desmond (MOORE & DESMOND 2004; DESMOND & MOORE 2009).

These authors emphasize that, as the grandson both of the libertarian poet and physician Erasmus Darwin, and of the Unitarian Josiah Wedgwood, who had in 1787 produced the famous "am I not a man and a brother?" cameo that became the emblem of the movement to abolish slavery, Darwin came from a family of free-thinkers.

From his earliest years Darwin abhorred slavery, and he was already a convinced abolitionist by the time he boarded the *Beagle* in 1831 for his formative round-the-world voyage. His subsequent experiences in Brazil, where he witnessed hideous cruelties being inflicted on slaves, and in Argentina, where he saw the pampas Indians being slaughtered to make way for Spanish ranchers, only confirmed him in his egalitarian views.

These convictions linked in with Darwin's deep belief in the fundamental unity of mankind. In Darwin's early days it was still actively debated whether the races of mankind had been separately created, or whether they were simply varieties of one single species. This was no mere academic argument; it had significant political dimensions, too. Supporters of slavery, the polygenists, opted for separate creation; whereas the anti-slavery monogenists believed in human unity. And the monogenist Darwin must have been particularly appalled when, following the publication of *On the Origin of Species*, the pro-slavery forces began to suggest that the various human races had descended from separate species of ape.

The simplest explanation for Darwin's going out on a limb with a work as provocatively titled as *The Descent of Man* is thus that he simply felt a deep moral obligation to set the record straight. Still, Moore and Desmond convincingly argue that in the course of its writing the project seems to have taken on a life of its own, and that *The Descent* came to be at least as important to its author as a showcase for his notion of sexual selection. Indeed, the monogenist tract could hardly be separated from the issue of selective mechanism, since sexual selection - in other words, mate-choice - was Darwin's chosen mechanism to explain "the divergence of each race from the other races, and all from a common stock".



THE  
DESCENT OF MAN,  
AND  
SELECTION IN RELATION TO SEX.

By CHARLES DARWIN, M.A., F.R.S., &c.

IN TWO VOLUMES.—VOL. I.

WITH ILLUSTRATIONS.

LONDON:  
JOHN MURRAY, ALBEMARLE STREET.  
1871.

[The right of Translation is reserved.]

Fig. 1 - Title page of the first edition of "The Descent of Man" by Charles Darwin.  
- Frontespizio della prima edizione di "The Descent of Man" di Charles Darwin.

## Darwin and the Human Fossil Record

Still, Darwin had chosen to title his book *The Descent of Man*. And “descent” was a word that he had long equated with “ancestry.” Given this equivalence, it seems at least a bit odd that in the entire two volumes of the work there is virtually no consideration of any fossils that might have given a historical embodiment to the notion of human ancestry.

Even when Darwin was writing the *Origin of Species* in 1858-1859, a handful of “antediluvian” human fossils were already known. The most famous of these was the partial skeleton discovered in 1856 in the “Little Feldhofer Grotto”, a limestone cave in the Neander Valley, near Dusseldorf in Germany. This fossil, associated with the bones of mammal species now extinct, was destined in 1863 to become the type specimen of *Homo neanderthalensis*, an extinct cousin to our own species, *Homo sapiens*.

Of course, it is rather unlikely that the Neanderthal fossil came to Darwin’s attention before he wrote the *Origin*. For Hermann Schaaffhausen’s description of it was translated into English by the London anatomist George Busk only two years later, in 1861. This translation was, however, published an entire decade before *The Descent of Man* first appeared; and it unleashed a furious debate that cannot have escaped Darwin’s attention. This alone makes it a little odd that the detail-obsessed Darwin made no more than passing reference to the Feldhofer skull in the *Descent*; and the omission appears all the more remarkable in light of the fact that in 1863 Busk had already described another individual, of similarly distinctive appearance, from the British possession of Gibraltar.

Taken together, these two specimens had demonstrated pretty conclusively by the mid-1860s that the Neanderthal morphology did not simply represent simply a pathological form of *Homo sapiens*, as some influential biologists had claimed. Clearly, it was at the very least a highly distinctive human “variety” that needed explanation of some kind. In sharp contrast to that of modern humans, the Neanderthal skull was very long and low. What’s more, it terminated in front in prominent brow ridges that arched individually above each eye; and at the rear it showed a curious bulge that became known as a “chignon” or “bun.” On the other side of the balance, this skull had evidently contained a brain that was equal in size to the brain that resided in the heads of modern people.

So, however you looked at it, this was very obviously an important fossil. It begged explanation rather than dismissal. But the *only* reference that the astonishingly erudite Darwin made to it in *The Descent of Man* was that

“some skulls of very high antiquity, such as the famous one of Neanderthal, are well developed and capacious” (DARWIN 1871, vol. 1, 140).



Fig. 2 - First illustration of *Homo neanderthalensis* (1863).  
- La prima illustrazione di *Homo neanderthalensis* (1863).

Indeed, only indirectly in *The Descent of Man* did Darwin even intimate that the human species might have possessed extinct relatives - despite the fact that the entire *Origin of Species* had been suffused with the notion that having extinct relatives must be a general property of all living forms.

## Darwin and the Antiquarians

In his introduction to *The Descent* Darwin partially excused himself for making only passing reference to human antiquity by deferring to the work of others. But there was very likely another key to Darwin’s reluctance to embroil himself too closely with the actual tangible evidence for human ancientness and ancestry. Quite simply, the 1860s, the years leading up to the publication of the *Descent of Man* were a period of rampant fraud and fakery in the antiquities business - and a business it certainly was.

By the time Darwin published the *Descent* it was widely accepted in science that, at the very least, the human past far antedated Biblical accounts. And an energetic search was on for evidence of that ancient past, with wealthy dilettantes pouring money into excavations all across Europe.

Today we honor the French antiquarian and customs-collector, Jacques Boucher de Perthes, as the first man to recognize the Ice Age stone handaxes found in the terraces of the Somme River as the products of truly ancient humans. But during the 1840s and 1850s Boucher de Perthes was widely ridiculed as the gullible victim of hoaxers; and indeed it is true that he was entirely indiscriminating in what he was prepared to consider ancient. Many of his prize artifacts turned out to have been knapped by his quarrymen, who were only too happy to con their employer out of a few francs.



Fig. 3 - Edward Simpson, alias "Flint Jack".  
- Edward Simpson, alias "Flint Jack".

Of course, Boucher de Perthes was not alone. Profitable deception of the gentry, by clever con men from the underclasses, was a major component of the class warfare that was rampant all across Europe in the mid-nineteenth century. But de Perthes had, in particular, been embroiled in a famous hoax involving a supposedly antediluvian human fossil.

Here's the story. In early 1863 de Perthes offered a reward of 200 francs to any workman who could find the remains of the maker of his ancient stone tools. And on March 28 of that year, a supposedly ancient human jawbone duly showed up, along with handaxes, at a site called Moulin-Quignon. A scandal almost immediately blew up over the authenticity of this object and the stone tools supposedly associated with it, and eventually an international commission was convened to settle the matter. Boucher de Perthes himself was eventually exonerated as a fraudster, but the commission remained deadlocked over the authenticity of the fossil and the tools.

The whole affair added up to the sort of unseemly squabble that Darwin most detested, and always did his best to avoid. To make things worse, there were similar and equally embarrassing scandals closer to home. In England, the so-called "Prince of Counterfeiters" was one Edward Simpson, alias "Flint Jack." During several years of assisting a local physician who dug for antiquities in his spare time, Flint Jack taught himself the art of stoneworking. Soon this gifted flintknapper was producing supposedly Stone Age tools that would fool even the most expert eye. And he sold his forgeries to collectors and museums all over the country. Finally he brazenly peddled them as his own work, before the sheer quantity of real Stone Age artifacts coming onto the market put him out of business and he ended up in jail.

There can be little doubt that Darwin found all this fraud and scandal in the antiquarian marketplace very distasteful, and it must surely have been at least a con-

tributory factor in his reluctance to dabble in the human fossil record. Nonetheless, one still feels impelled to ask why Darwin gave even the *idea* of an actual fossil ancestry for humans such a wide berth in his great work on human descent - in which he was perfectly prepared to indulge in (very shrewd) theoretical speculation. Why was it that he was never publicly (or, it seems, even privately) willing to hazard any guesses as to what ancient human fossils might actually be telling us about the human past?

Quite possibly, it is enough to conclude with Moore and Adrian that Darwin considered it simply too provocative, both politically and socially, to tie human ancestry in with any tangible evidence. Certainly, it is well known that even the contemplation of going near this issue caused this complex man extreme physical and mental distress.

## Reservations about the Fossil Record

Maybe Darwin did indeed feel that the safest route to take was to limit himself to the comparative method, simply contrasting humans with apes and other primates, and merely conjecturing about possible transitional forms. After all, such speculative intermediates remained hypothetical, unenshrined in any material object that his opponents might take exception to. But another contributing factor may also have been Darwin's remarkably suspicious attitude toward the fossil record as a record of actual events. We know that he was acutely aware of its deficiencies; and of course, by its very nature, the fossil record is and always will be incomplete. What's more, in Darwin's time it was obviously vastly more incomplete than it is now, and it very conspicuously lacked many of the intermediate forms predicted by Darwin's theory.

Still, while it is reasonable that Darwin should not have wished to pin his theory irrevocably to the fossil record, why he deliberately shied away from that record is less understandable. Under the rubric of "Objections to the Theory," Darwin devoted an entire chapter in the *Origin of Species* to the "Imperfection of the Geological Record," giving reason after reason not only why this record *was* not adequate, but why it *could* not be adequate.

This profound wariness of the fossil record may also seem a bit odd in a person who not only considered himself first and foremost a geologist, but whose nascent ideas about the history of life had been so clearly nourished by the fossils he had encountered during his voyage on the *Beagle*. Darwin was, for example, always ready to acknowledge what a seminal event his discovery during the *Beagle* voyage of the amazing South American fossil glyptodonts - relatives of the living armadillos - had been for him, leading him toward the conclusion that species were not immutable.

But although his geological observations had made Darwin sensitively aware of the transitory nature of everything he saw around him, he clearly felt even more acutely the inadequacies of the fossil record as a record of specific events. And although Darwin's work fostered in others the idea that fossil "missing links" were out there to be discovered, if only one would go out to look for them, Darwin himself seems to have been dubious that such links would ever be found.

Nonetheless, it is well established that, long before he published *On the Origin of Species*, Darwin was fully aware that his theory firmly placed our species *Homo sapiens* as simply another product of the evolutionary process, among literally millions of others. So while the effective absence of a hominid fossil record before he published the *Origin* meant that Darwin could not have made extensive reference to it even if he had wanted to, we still need to ask if there are reasons beyond the admittedly powerful sociopolitical ones I've already alluded to for his reluctance to broach it in *The Descent of Man*.

### "Man's Place in Nature"

One such reason is, of course, the very specific monogenist agenda that Darwin was pursuing in that work. But another may be that his colleague Thomas Henry Huxley, who is often, if misleadingly, referred to as "Darwin's Bulldog," had already tackled the matter head-on in his 1863 book of essays, *Evidence as to Man's Place in Nature*. The last chapter in Huxley's book was explicitly titled *On Some Fossil Remains of Man*, and it dealt exclusively with the best-preserved and best-documented fossil humans known at the time.

These were the Neanderthal skullcap already mentioned, and the two partial crania from Engis, in Belgium, that had been published by Philippe-Charles Schmerling in the 1830s (SCHMERLING 1833-4). By the time Huxley wrote, the Engis fossils had been certified as contemporaneous with the extinct Ice Age woolly mammoth and woolly rhinoceros by no less an authority than Darwin's close colleague, the geologist Charles Lyell, who had also pronounced the Neanderthaler to be of "great but uncertain antiquity."

One of the Engis crania, a juvenile braincase, had belonged to a Neanderthal. But it was unrecognized as such, and in any case Huxley largely ignored it. The other cranium was adult, and it was on a plaster cast of this specimen that Huxley based his analysis. The Engis adult clearly is a *Homo sapiens*, and it is now known to represent a later burial into the Neanderthal deposits at the site - which means it is younger than those deposits. Still, Huxley's ignorance of this fact may not in fact have mattered much, in light of his rather perfunctory and dismissive analysis of the adult Engis specimen. He rec-

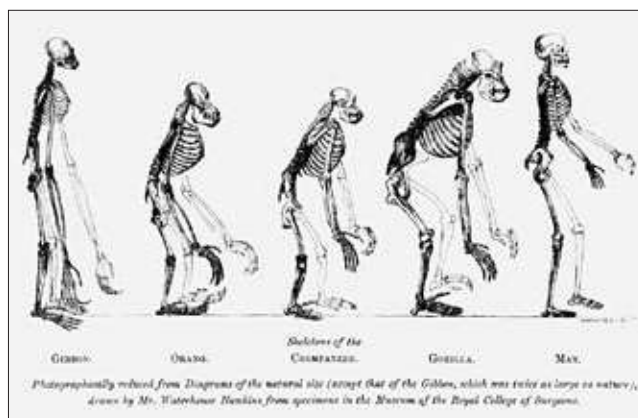


Fig. 4 - Diagram of the primates' skeletons in "Evidence as to Man's Place in Nature" by Thomas Huxley.

- Confronto fra gli scheletri dei primati da "Evidence as to Man's Place in Nature" di Thomas Huxley.

ognized this cranium as that of a fully modern person, and concluded no more than that it had:

"belonged to a person of limited intellectual faculties, and a low degree of civilization" (HUXLEY 1863, 114-5).

He then proceeded to the Neanderthal skull, an altogether more interesting specimen to which he devoted much greater space. And although he was amazed by the differences between the cranial contours of the Neanderthal and Engis crania, Huxley noted that in certain features the Neanderthaler showed "*points of similarity ... with ... certain Australian skulls*" (HUXLEY 1863, 134).

The comparison with "certain Australian skulls" comes straight out of the Great Chain of Being, the medieval concept whereby living beings were ranked in a graded series from lowest to highest. For in nineteenth-century European scientific mythology the Australian aborigines belonged, along with the Bushmen, to the "lowest" of races. Huxley next established, at least to his own satisfaction and in obedience to the Great Chain, that a graded morphological series existed "in ascending from the lower animals up to man," and that this trend was continued up from the "lower" human races, to the "higher" ones. And by superimposing the profile of the Neanderthaler on to an Australian skull, as seen here, he somehow contrived to convince himself that:

"A small additional amount of flattening, and lengthening, with a corresponding increase of the supraciliary ridge, would convert the Australian brain case into a form identical with the aberrant [Neanderthal] fossil" (HUXLEY 1863, 146).

So, whereas

"[The Engis skull] is ... a fair average human skull, which might have belonged to a philosopher, or might have contained the thoughtless brains of a savage" (HUXLEY 1863, 147),

"... The case of the Neanderthal skull is very different. Under whatever aspect ... we meet with ape-like charac-

ters, stamping it as the most pithecoïd of human crania yet discovered" (HUXLEY 1863, 147).

This despite the obvious fact that this skullcap had held a large brain: indeed a brain bigger than the modern average. Countervailing this, in Huxley's judgment the very robust preserved bones of the individual's skeleton were of a stoutness to be "expected in savages." As a result, he concluded,

*"The Neanderthal bones [cannot] be regarded as the remains of a human being intermediate between men and apes ... [they are] pithecoïd, the extreme term of a series leading gradually ... to the highest and best developed of human crania"* (HUXLEY 1863, 149).

By this intellectual sleight of hand, Huxley dismissed the Neanderthal find as a mere savage *Homo sapiens*, essentially robbing the slender human fossil record then known of any potential human precursor. Instead, in a move that was as radical in its way as the alternative would have been, Huxley pushed the theoretical antiquity of the species *Homo sapiens* back into the remotest past, and was moved to ask:

*"Where, then, must we look for primæval Man? Was the oldest Homo sapiens pliocene or miocene, or yet more ancient? In still older strata do the fossilized bones of an ape more anthropoid, or a Man more pithecoïd, than any yet known await the researches of some unborn palæontologist?"* (HUXLEY 1863, 150).

All in all, this was not merely an exercise in ignoring the unique morphology of the Neanderthal specimen - which in the same year had been branded a distinct species, *Homo neanderthalensis*, by the Dublin anatomist William King. It was also a considerable reversal of perspective for one who had been a convinced saltationist. After all, when reviewing *On the Origin of Species*, Huxley had been moved to observe that:

*"Mr Darwin's position might ... have been even stronger ... if he had not embarrassed himself with the aphorism 'natura non facit saltum' ... We believe ... that Nature does make jumps now and again, and a recognition of that fact is of no small importance in disposing of many minor objections to the doctrine of transmutation"* (HUXLEY 1860, 77).

Famously combative though Huxley was, with none of Darwin's reluctance to hash out in public the implications of evolution for human origins, he too apparently just caved in when it came to the contemplation of the human fossil record. What Huxley's motives may have been here for dismissing a truly distinctive fossil as a bizarre member of *Homo sapiens* is something that is hard to judge. But I am pretty sure that my colleague Jeffrey Schwartz was right to suggest that, if Huxley had been writing about any other mammal than a hominid, he would have reached a very different conclusion (SCHWARTZ 2006).

Almost certainly, he would have discerned one of Nature's jumps between the Neanderthaler and the avowedly "higher" type from Engis.

But as it was, Huxley elected to reject the notion of "a human being intermediate between men and apes" in favor of viewing the Feldhofer Neanderthal specimen as a member of *Homo sapiens*, via an extension into the past of the ancient "racial hierarchy" that expressed itself in terms not only of morphology, but of technology, society and presumed intelligence. And bizarrely, by employing anti-Darwinian reasoning in support of the conclusion that the Feldhofer fossil was merely a brutish *Homo sapiens*, Huxley provided Darwin with just the excuse he needed not to broach the fossil evidence in *The Descent of Man*.

Darwin could safely ignore the crucial Neanderthal fossil because his colleague Huxley, in however non-Darwinian a spirit, and however much in contradiction of his own principles, had given him clear license to do so.

## Darwin as Paleoanthropologist

There were, then, many reasons why Darwin should have been disposed in *The Descent of Man* to shrink from any substantive discussion of the human fossil record. The record was awash with fakes; any discussion of it was rife with social and political pitfalls; and anyway, by his own associate's testimony, it contained nothing that could have any relevance to ancient and now-extinct human precursors. Add to that Darwin's innate suspicion of the distorting effects of incompleteness in the fossil record, and he may have felt that a large degree of discretion on the matter was mandatory.

This was, of course, a setback for the nascent science of paleoanthropology. But it does not mean that *The Descent of Man* has not been exceedingly influential. Indeed, its theoretical speculations have mesmerized the sciences of human origins over the last 150 years. Just as it is easy for English speakers to forget how much they owe to William Shakespeare for the language they use daily, paleoanthropologists tend to lose sight of the fact that much received wisdom in their science has come down to us direct from Darwin.

Darwin it was, who proposed a mechanism for the structural continuity of human beings with the rest of the living world, and who gave a detailed argument for human descent from an "ape-like progenitor." It was Darwin who documented beyond doubt that all living humans belong to a unitary species with a single origin - which we now know, on the basis of evidence of which he could never have dreamed, to have been around 200,000 years ago. Darwin also had the inspired hunch that our species had originated in the continent of Africa - again, a guess amply substantiated by later science. His perceptions in *The Descent* and in *The Expression of the Emotions in Man and Animals* (DARWIN 1872) on the behaviors of other primates and how they relate to the way humans behave were remarkably

astute, given the highly anecdotal nature of what was then known.

And, for better or (very probably) for worse, a single comment in *The Origin* is proclaimed as founding Scripture by practitioners of today's evolutionary psychology industry:

*"Psychology will be based on a new foundation, that of the necessary acquirement of each mental power and capacity by gradation"* (DARWIN 1859, 488).

Virtually every section in the first part of the *Descent of Man* and in the *Expression of the Emotions* foreshadows an area of anthropology, primatology, or evolutionary biology that has independently flowered since. And much as one regrets that he seems never to have placed on record what he really thought about the Neanderthal fossil, Darwin's insights in these seminal works almost literally set the agenda that scientists in these fields have been following over the last century and a half.

## References

- BUSK, G. 1864. Pithecan priscoid man from Gibraltar. *The Reader*, 23 July 1864.
- DARWIN, C. 1859. *On the Origin of Species by Means of Natural Selection, or the Preservation of Favoured Species in the Struggle for Life*. London: John Murray.
- DARWIN, C. 1871. *The Descent of Man, and Selection in Relation to Sex*. 2 vols. London: John Murray.
- DARWIN, C. 1872. *The Expression of the Emotions in Man and Animals*. London: John Murray.
- DESMOND, A., & J. MOORE. 2009. *Darwin's Sacred Cause: How a Hatred of Slavery Shaped Darwin's Views on Human Evolution*. New York and Boston: Houghton Mifflin Harcourt.
- HUXLEY, T.H. 1860. The Origin of Species, from Collected Essays. *Darwiniana* 2: 71-9. London: Macmillan.
- HUXLEY, T.H. 1863. *Evidence as to Man's Place in Nature*. New York: Appleton.
- MOORE, J., & A. DESMOND. 2004. Introduction in *The Descent of Man, and Selection in Relation to Sex*, of C. Darwin, xi-lvii. London: Penguin Group.
- SCHAAFFHAUSEN, H. 1861. On the crania of the most ancient races of man [trans. G. Busk]. *Nat. Hist. Rev.* 1: 155-76.
- SCHMERLING, P.-C. 1833-4. *Recherches sur les Ossements Fossiles Découvertes dans les Cavernes de la Province de Liège*. 2 voll. Liège: Ed. Collardin.
- SCHWARTZ, J.H. 2006. Race and the odd history of human paleontology. *Anat. Rec. (New Anat.)* 289, B: 225-40.

## Acknowledgment

The present contribution is a condensed version of a lecture given on February 4, 2009 for the Museo Friuliano di Storia Naturale, Udine, and at the Accademia Lincei, Rome, on February 11, 2009. An expanded and somewhat different version has been published in English, in *Evo. Edu. Outreach*, 2009, 2: 28-34. I thank Giuseppe Muscio for his invitation to submit this variant to the *Atti del Museo Friuliano di Storia Naturale*.

## Riassunto

Può sembrare sorprendente che, data la sua enorme e persistente influenza nel campo della paleoantropologia, trattare (nuovamente) l'argomento di Charles Darwin e dell'evoluzione umana nel bicentenario della nascita del grande naturalista si riveli essere un'impresa alquanto frustrante. Questo non è dovuto ad una avversione da parte di Darwin ad indulgere in speculazioni teoriche riguardanti le origini dell'uomo; ne descrive piuttosto l'estrema riluttanza nel rimanere invischiato con le tracce concrete e tangibili dell'evoluzione umana. Darwin fu, naturalmente, estremamente reticente riguardo l'argomento dell'evoluzione umana nelle pagine del suo grande libro *L'origine delle specie* nel quale l'unica menzione alle origini dell'uomo fu il casuale commento: "light will be thrown on the origin of man and his history" ("Luce verrà gettata sull'origine dell'uomo e la sua storia"): una chiara dimostrazione del fatto che Darwin comprendeva pienamente le implicazioni del suo lavoro per quanto attiene la nostra specie, *Homo sapiens*.

C'erano ovviamente diverse ragioni alla base della trascuratezza di Darwin nell'affrontare questa questione così centrale. Prima di tutto c'era l'ambiente intellettuale e sociale nel quale viveva. Estremamente remissivo, Darwin temeva la reazione che sapeva avrebbe ricevuto ogni tentativo, da parte sua, di chiarire la sua posizione sull'origine umana. Il che rende difficile da comprendere perché Darwin si sentisse così fortemente motivato a pubblicare *L'origine dell'Uomo* e ancora più difficoltoso comprendere perché gli diede il provocatorio - e non molto accurato - titolo che gli diede.

Una ragione plausibile per Darwin per esporsi ne *L'origine dell'uomo* è stata recentemente suggerita da Moore e Desmond che enfatizzano la provenienza di Darwin da una famiglia di liberi pensatori. Sin dall'infanzia Darwin abborriva la schiavitù, ed era già una convinto abolizionista al tempo in cui, nel 1831, si imbarcò sul Beagle per il suo viaggio formativo attorno al mondo. La spiegazione più semplice per l'esporsi di Darwin con un lavoro così provocatorio è intitolato *L'origine dell'uomo e la scelta in rapporto col sesso* è quindi che egli molto semplicemente sentisse un profondo obbligo morale a dare ordine alla questione. Nondimeno "origine" era una parola che da molto tempo era accomunata con antenati. Data questa equivalenza di significato, sembra quantomeno strano che nei due volumi che compongono il lavoro non vi sia virtualmente alcuna trattazione dei fossili che avrebbero potuto dare sostanza al concetto di antenati dell'umanità.

Persino quando Darwin stava scrivendo *L'origine delle specie*, una manciata di "antidiluviani" fossili di origine umana erano già conosciuti: il più famoso di questi era lo scheletro parziale scoperto nel 1856 nella Valle di Neander, in Germania e destinato a diventare nel 1863 il primo esemplare di *Homo neanderthaliensis*, un cugino - estinto - della nostra stessa specie, l'*Homo sapiens*.

Naturalmente, è piuttosto difficile che il fossile di Neanderthal sia arrivato all'attenzione di Darwin prima che egli scrivesse *L'origine delle specie*. La descrizione del reperto pubblicata da Schaffhausen fu tradotta in inglese nel 1861 e scatenò un furioso dibattito che non poteva essere sfuggito all'attenzione di Darwin. Basta questo a rendere piuttosto strano che Darwin, notoriamente ossessivo riguardo ai dettagli, non faccia che un accenno al cranio ritrovato a Feldhofer e l'omissione appare ben più rimarchevole alla luce del fatto che nel 1863 Busk avesse già descritto un ulteriore individuo proveniente da Gibilterra.

Così, da qualunque lato si guardasse alla faccenda, questo era un fossile di evidente importanza, ma l'unico accenno che lo straordinariamente erudito Darwin fece ne *L'origine dell'uomo e la scelta in rapporto col sesso* fu che "alcuni crani molto antichi, quale quello famoso di Neanderthal, sono ben sviluppati e capienti". Darwin ne *L'origine dell'uomo* accenna solo indirettamente che la specie umana poteva avere avuto degli antenati ormai estinti, nonostante *L'origine delle specie* fosse permeata dalla nozione che avere antenati estinti dovesse essere caratteristica generale di ogni forma di vita.

Molto probabilmente c'è una ulteriore chiave per comprendere la riluttanza di Darwin a rimanere invischiato con le prove tangibili dell'antichità e dell'ascendenza umana. Semplicemente gli anni '60 dell'800 furono un periodo di truffe e falsificazioni nel grande business legato alla vendita di reperti!

In ambiente scientifico era allora ampiamente accettato che come minimo il passato umano fosse antecedente a quanto indicato nella Bibbia. E una vivace ricerca era in corso riguardo questo antico passato, con facoltosi dilettanti che investivano denaro in scavi attraverso tutta l'Europa. Oggi noi onoriamo l'antiquario e collezionista privato francese Jacques Boucher de Perthes in qualità di primo uomo a riconoscere le asce dell'età glaciale trovate nelle terrazze della Somma quali prodotto di uomini primitivi, ma nel corso degli anni '40 e '50 del 1800 Boucher de Perthes era stato ridicolizzato come un credulone vittima di imbrogli; e francamente è vero che egli fu assolutamente indiscriminato in cosa era disposto a considerare antico (compreso un falso di uomo antediluviano).

L'intera questione si aggiungeva alle indecorose polemiche che Darwin detestava profondamente, e fece sempre del suo meglio per evitare. A rendere le cose peggiori, c'erano scandali simili ed altrettanto imbarazzanti ben più vicino a casa. In Inghilterra, il così chiamato "Principe dei contraffattori" era un tale Edward Simpson, alias "Flint Jack" (Jack della selce) che vendette i suoi falsi a collezionisti e musei ovunque nel Paese. Ci potevano esser pochi dubbi che Darwin trovasse tutti questi imbrogli e scandali che si verificavano nel mercato antiquario molto spiacevoli, e sicuramente devono essere stati uno dei fattori a contribuire alla sua riluttanza a occuparsi delle testimonianze fossili umane. Certamente, è risaputo che anche il solo pensare ad avvicinarsi a questo argomento causasse a quest'uomo così complesso un estremo disagio sia fisico che mentale.

Forse Darwin riteneva che la strada più sicura da prendere fosse di limitarsi al metodo comparativo, raffrontando semplicemente gli umani alle scimmie e agli altri primati, e semplicemente fare alcune congetture in merito a possibili forme intermedie.

Sotto la voce "Obiezioni alla teoria", Darwin dedicò un intero capitolo ne *L'Origine delle specie* alle "mancanze nei dati geologici", impilando un motivo sopra l'altro non solo su perché questi dati non fossero adeguati ma sul perché non potessero essere adeguati. Questa profonda attenzione riguardo la documentazione fossile può sembrare un poco strana in una persona che non solo considerava se stessa in primo luogo un geologo, ma le cui iniziali idee riguardo la storia della vita erano state così chiaramente alimentate dai fossili che aveva incontrato durante il suo viaggio sul Beagle. Egli però sentiva chiaramente l'inadeguatezza della documentazione fossile come prova di specifici eventi.

Nondimeno, è sicuro che, ben prima che egli pubblicasse *Sull'origine delle specie*, Darwin fosse completamente cosciente che la sua teoria inquadrasse fermamente la nostra specie *Homo sapiens* semplicemente come una dei tanti prodotti del processo evolutivo, letteralmente tra milioni di alte.

Una di queste ragioni è, ovviamente, l'obiettivo specificatamente monogenista che Darwin stava perseguendo in quel lavoro. Ma un altro può essere che il suo collega Thomas Henry Huxley aveva già affrontato a testa bassa la questione nella sua raccolta di saggi, *Il posto dell'uomo nella natura*. L'ultimo capitolo del libro di Huxley era esplicitamente intitolato *Sopra alcuni resti fossili dell'uomo e trattava esclusivamente i fossili umani meglio conservati e documentati conosciuti all'epoca*.

Con un gioco di destrezza intellettuale, Huxley licenziò il ritrovamento di Neanderthal come una mera versione selvaggia dell'*Homo sapiens*, derubando sostanzialmente la scarsa testimonianza fossile umana allora conosciuta di ogni possibile potenziale quale precursore dell'uomo. Invece, con una mossa che fu a suo modo tanto radicale quanto avrebbe potuto esserlo l'alternativa, Huxley sospinse la teoria antichità della specie *Homo sapiens* nel più remoto passato e fu indotto a chiedere: "Dove, quindi, dobbiamo cercare il primo Uomo? Fu il più vecchio *Homo sapiens* del Pliocene o del Miocene, oppure ancora più antico? Ossa fossilizzate di una scimmia più antropomorfa, o di un uomo più pitecoide di quelli finora conosciuti attendono, in strati ancora più antichi, le ricerche di qualche paleontologo che non è ancora nato?". Dopo tutto, mentre recensiva *Sull'origine delle specie*, Huxley era stato portato ad osservare che: "La posizione di Darwin potrebbe... essere stata persino più forte... se egli non avesse imbarazzato se stesso con la citazione "natura non facit saltum"... Noi crediamo... che la Natura fa dei salti di tanto in tanto, ed il riconoscimento di questo fatto non è di scarsa importanza nel risolvere molte delle minori obiezioni nella dottrina della trasformazione".

Ma fosse come fosse, Huxley decise di rigettare la nozione di "un essere vivente intermedio tra Uomo e scimmie" per favorire la visione del reperto ritrovato nel Feldhofer Neanderthal come un membro della specie *Homo sapiens*, facendo una deviazione attraverso la vecchia "gerarchia razziale" che si esprimeva in termini non solo di morfologia, ma anche di tecnologia, società e supposta intelligenza. E bizzarramente, nell'utilizzare i ragionamenti di Darwin per supportare la conclusione che il fossile di Feldhofer fosse solo una versione abbruttita dell'*Homo sapiens*, Huxley fornì a Darwin esattamente la scusa che gli serviva per evitare di discutere le prove fossili in *L'origine dell'uomo*.

C'erano, allora, molte ragioni per le quali Darwin poteva aver deciso di tenersi alla larga da qualunque sostanziale disussione riguardo ai fossili di origine umana. La documentazione era piena di falsi; ogni discussione al riguardo abbondava di trabocchetti sociali e politici; e, in ogni caso, secondo le testimonianze dei suoi stessi colleghi, non conteneva nulla che potesse avere una qualche importanza al riguardo degli antichi ed ora estinti precursori dell'umanità. Se aggiungiamo a questo la naturale propensione di Darwin a guardare con sospetto gli effetti distortivi dovuti all'incompletezza della documentazione fossile, e si arriva alla conclusione che può aver ritenuto che un ampio grado di discrezione sull'argomento fosse obbligatoria.

Questo era, naturalmente, un ostacolo per la nascente scienza della paleoantropologia. Ma questo non significa che *L'origine dell'uomo* non sia stato estremamente influente. Difatti, le speculazioni teoriche ivi citate hanno influenzato lo studio delle origini umane negli ultimi 150 anni. Fu Darwin che propose il meccanismo per la continuità strutturale degli esseri viventi con il resto del mondo vivente, e che diede una dettagliata spiegazione per la discendenza dell'uomo da un progenitore simile alla scimmia. Fu Darwin che documentò oltre ogni dubbio che tutti gli uomini viventi appartengono ad una specie unitaria con la stessa origine - cosa che ora sappiamo essere accaduta, sulla base di prove di cui egli non avrebbe nemmeno sognato, circa 200.000 anni fa. Darwin ebbe anche la brillante intuizione che la nostra specie avesse avuto origine nel continente africano - una ipotesi, ancora una volta, ampiamente confermata dalla scienza più moderna. Le sue percezioni riguardo il comportamento degli altri primati e su come essi tendano a essere simili alla maniera in cui gli umani si comportano, citate ne *L'origine dell'uomo* e ne *L'espressione dei sentimenti nell'Uomo e negli animali*, erano decisamente acute, data l'elevata percentuale di dati a carattere anedddotico di quelle che erano le conoscenze di allora.

E, nel bene e (probabilmente) nel male, una semplice considerazione ne *L'origine dell'uomo* è stata dichiarata dagli attuali professionisti dell'industria della psicologia evoluzionista come fondamento della loro scienza: "La psicologia dovrà essere basata su un nuovo fondamento, quello secondo il quale l'acquisizione di ogni capacità mentale e abilità avviene per gradi".

Virtualmente ogni pagina nella prima parte de *L'origine dell'uomo* e ne *L'espressione dei sentimenti nell'Uomo e negli animali* faceva prevedere un'area dell'antropologia, dello studio dei primati, e della biologia evoluzionistica che si è sviluppato in seguito in maniera indipendente. E per quanto ci si possa dispiacere che egli non abbia mai scritto nero su bianco cosa realmente pensasse in merito ai resti di Neanderthal, la profonda analisi fatta da Darwin in questi determinanti lavori, hanno quasi letteralmente tracciato il cammino che gli scienziati stanno seguendo in questi campi negli ultimi centocinquanta anni.

Author's address - Indirizzo dell'Autore:

- Ian TATTERSALL  
Division of Anthropology  
American Museum of Natural History  
Central Park West at 79th Street, NEW YORK 10024-5334 USA